BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	WT Docket No. 99-328
	)	
911 Call Processing Modes	)	
	)	

COMMENTS OF THE
TELECOMMUNICATIONS INDUSTRY ASSOCIATION

The Telecommunications Industry Association ("TIA")[1] respectfully submits these comments in response to the Petition for Declaratory Ruling filed on October 3, 2003, the *ex parte* filing of November 25, 2003[2] by Wireless Consumers Alliance and individual petitioners (collectively "WCA") as well as the Joint Petition for Declaratory Ruling filed on October 14, 2003 and the *ex parte* filing of December 8, 2003 filed by the Joint Petitioners.[3] After reviewing the record and for the reasons stated below, TIA concludes that: (1) none of the interpretations provided by WCA concerning 911 call

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[1] TIA is the leading trade association representing the communications and information technology industry, with 700 member companies that manufacture or supply the products and services used in global communications. TIA is also accredited by the American National Standards Institute ("ANSI") to develop American National Standards used by the industry.

[2] Petition for Declaratory Ruling of Wireless Consumers Alliance, et al., WT Docket No. 99-328 (filed Oct. 6, 2003) ("WCA Petition"); *Ex Parte* Response of Wireless Consumers Alliance, *et al*., WT Docket No. 99-328 (Nov. 25, 2003) ("WCA Ex Parte").

[3] Joint Petition for Declaratory Ruling of AT&T Wireless, et al., WT Docket No. 99-328 (filed October 14, 2003) ("Joint Petition"); Comments on Petition for Declaratory Ruling and Ex Parte Response of Wireless Consumers Alliance of AT&T Wireless, et al., WT Docket No. 99-328 (filed December 8, 2003) ("Joint Comments").

processing requirements are consistent with underlying standards for analog calls; (2) implementation of each of WCA's interpretations would have required significant revisions to those analog standards; and (3) under existing standards a call is deemed to be completed upon the assignment of a voice channel.

I. INTRODUCTION

TIA was an active participant in CC Docket No. 94-102, the proceeding in which 911 call processing rules were adopted.[4] In that docket, TIA provided the Commission technical guidance surrounding the analog compatibility standards.[5] Additionally, TIA adopted a telecommunications systems bulletin, TSB-119, specifically to implement the Automatic A/B- Intelligent Retry ("AB-IR") methodology approved by the Commission.[6]

II. WCA'S INTERPRETATIONS ARE INCONSISTENT WITH ANALOG COMPATIBILITY STANDARDS

As TIA understands WCA's position, WCA believes that the Commission intended that the 17-second limit for call setup modify the standards-defined call completion process for analog-capable handsets. WCA argues that the Commission understood that "Conversation State," which is the state at which a call is considered "completed" under the analog compatibility standard, was insufficient to guarantee that a conversation could be held between the public safety answering point ("PSAP") and the

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[4] *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Second Report and Order, 14 FCC Rcd 10954 (1999) ("*Second Report and Order*").

[5] *See e.g.,* Ex Parte Presentation of CTIA, CC Docket No. 94-102, filed December 4, 1998, reflecting responses of TIA to questions raised by the Commission staff of TIA's TR 45 Committee.

[6] TIA/EIA Telecommunications Systems Bulletin, *Enhanced System Access Procedures for E911 Calls for Analog Cellular*, (Oct. 2000) ("TSB-119").

calling party. WCA asserts that a call cannot be deemed completed unless: (1) the call is successfully delivered to the landline carrier;[7] or (2) the base station receives the correct supervisory audio tone ("SAT") from the handset on the assigned voice channel.[8] The implication for either of these scenarios is that the handset would have to be aware whether or not the 911 call had been "completed" since call failure would require the handset to switch automatically to an alternative carrier within 17 seconds. In contrast, the Joint Petitioners have argued that call completion occurs when Conversation State is reached, i.e., when a voice channel has been successfully assigned.[9]

During the proceeding that led to the approval of AB-IR, TIA was asked several times by the Commission to provide guidance on how this methodology would be implemented.[10] In each of these cases, TIA, generally through CTIA comments, stated that a call would be considered completed with the assignment of a voice channel (i.e., when Conversation State was reached) and that AB-IR could be established within the framework of the existing analog compatibility standard.[11] This definition of call completion was well understood and well known.

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7 WCA Petition at page i.

8 WCA Ex Parte at page 21.

9 Joint Petition at page 3.

10 *See e.g.*, Ex Parte Presentation of CTIA, CC Docket No. 94-102, filed December 4, 1998, reflecting responses of TIA to questions raised by the Commission staff of TIA's TR 45 Committee.

11 Ex Parte presentation of CTIA, CC Docket No. 94-102, filed March 26, 1999 at page 2; Ex Parte presentation of CTIA, CC Docket No. 94-102, filed March 2, 1999 at page 2; Ex Parte presentation of CTIA, CC Docket No. 94-102, filed February 22, 1999 at page 2; Ex Parte presentation of CTIA, CC Docket No. 94-102, filed January 29, 1999

TIA was never asked by the Commission to undertake or even to consider changes to the analog compatibility standards that establish whether a call was completed. Similarly, the replacement of normal call completion methods with the use of SAT was not discussed. In short, the interpretations presented by WCA were not contemplated, and the definition of call completion contained in TIA/EIA 553-A as Conversation State or the successful assignment of a voice channel,[12] was not changed by the Commission's decision in the *Second Report and Order*.

As the Joint Petitioners correctly noted, the changes contemplated by WCA's interpretations would have required significant changes to TIA/EIA 553-A. If successful delivery to the landline carrier was mandated by the FCC, a standardized signaling method would need to be approved that would enable verification signals to proceed through the landline network and back to the mobile network. Additionally, as described in more detail below, base station standards, including a mandated fade timer for lost calls at the base station as well some manner of channel monitoring and supervision at the base station would likely be required to comply with the WCA interpretation. Moreover, a standard based on receipt by the landline carrier would have required significant revisions to standards for landline facilities and networks.

With specific regard to SAT, WCA appears to believe that the SAT signals should have and could have been used to determine if a call was completed during a 911 call initiation. SAT is used by the handset to monitor radio link continuity.[13] The SAT itself

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at page 3; and Ex Parte presentation of CTIA, CC Docket No. 94-102, filed December 8, 1998 at page 2.

[12] TIA/EIA-553-A, *Mobile Station – Base Station Compatibility Standard,* (November 1999) ("TIA/EIA 553-A") at 2.6.3.

[13] TIA/EIA 553-A at 2.6.4.1.

is one of three frequencies (5970, 6000, or 6030 Hz) that is added to the voice transmission by a base station. A handset detects, filters and modulates the transmitted voice channel carrier with this tone.[14] Handsets that are Discontinuous Transmission (DTX) capable are allowed to suspend transmission of SAT and reduce transmitter power if there is no voice activity by the handset user. In contrast to the handset, the base station simply modulates the SAT on to the voice channel carrier. The analog standards do not require the base station to monitor, detect or have a fade timer specified for SAT.[15] In order for the interpretation that WCA has suggested to be possible, the base station would need to have a standardized method for detecting and monitoring the SAT. This is even more problematic for systems that support DTX capable handsets since the SAT signal might not be transmitted by the handset during pauses in voice activity.

Additionally, although it is unclear how such a change would be accomplished, presuming such a change would utilize the existing SAT signaling as WCA argues, at a minimum, would have required modification to the base station analog standards. As noted above, there is no requirement in the current standards for the detection or monitoring of the SAT at the base station. Therefore, any requirement for the base station to utilize the SAT would have required changes in TIA/EIA 553-A and the associated base station minimum performance standard, TIA 712. Moreover, had the FCC intended for SAT to be used in the manner suggested by WCA, the Commission undoubtedly would have adopted rule requirements pertinent to base station

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[14] TIA/EIA 553-A at 2.4.1.

[15] TIA/EIA 553-A at 3.4.1.1 (no SAT detection requirements); 3.4.1.3 (no fade timing status requirements); and 3.6.4.1 (no loss of radio link continuity requirements).

manufacturers. However, Section 22.921 of the Commission's rules[16] only contains requirements for handsets manufactured after February 13, 1999. It does not affect any requirements applicable to base station manufacturers.

Furthermore, completion of these revised standards would have taken far longer than the nine-month period that the Commission required for 911 call processing modifications.

Typically, a new standard or a revision to a standard at TIA begins with the creation of a Project Number or "PN" at TIA. Once the project is approved, subject matter experts may meet monthly (or in some cases at TIA every 6 months) to progress the standards development through contributions that come from the participants in the process. When what is believed to be mature and stable text exists, that proposed standard is then sent to interested parties for balloting and collection of comments from others. The balloting period has ranged from 30-60 days. At the next meeting of the formulating group after the ballot closes, all comments and negative ballots are reviewed and addressed and changes may be made to the document which then need to go out on another ballot. There may be several iterations of this process for a complex document. When there is final consensus on the technical content the standard is then sent to TIA's Secretariat for publication. For the time frame in question, standards development took well in excess of a year, and for some standards, several years.

[16] 47 C.F.R. § 22.921.

III. INDUSTRY IMPLEMENTATION OF 911 CALL PROCESSING CHANGES TO THE ANALOG STANDARD DID NOT CHANGE THE DEFINITION OF CALL COMPLETION

TIA took note of the changes made in the *Second Report and Order*, and efforts were undertaken to implement these changes in TSB-119. TSB-119 defined an emergency call status system that would distinguish between 911 and routine calls. If the call initiation was to 911, the emergency call status flag was enabled.[17] For other calls, this was not enabled.[18] Further, if an emergency call failed, i.e., if a call failed to reach Conversation State, a new flag was enabled indicating that the 911 call had failed.[19] With this failure, the analog mode handset was instructed to search the alternate carrier (if the call was on the preferred carrier, the new scan of control channels was switched to the non-preferred, etc.) automatically.[20] Additionally, visual feedback was required for an emergency call and audio feedback was permitted.[21] No other changes to TIA 553-A were made.

None of the changes made by TSB-119 was a major change. In fact, manufacturers were able to make the changes to their handsets prior to TSB-119's final approval because the changes did not require major changes to the handsets; nor did the change require modification of analog base station standards and equipment.

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17 TSB-119 at 2.6.2.4.

18 *Id.*

19 *See e.g.*, TSB-119 at 2.6.3.4.

20 TSB-119 at 2.6.3.1.2.

IV. CONCLUSION

TIA believes that the Commission did not take any action in the *Second Report and Order* to modify the requirements concerning call completion. The 911 call processing methodology of AB-IR was a method vetted within the standards community and consistently provided to the Commission as a way to improve 911 call processing without extensive changes to the analog compatibility standard. Changes consistent with the WCA interpretation would have required extensive modifications to the analog compatibility standard and would not have permitted manufacturers sufficient time to comply with the Commission's nine-month timeline for compliance. TIA strongly agrees with the Joint Petitioners' interpretation that Call Completion, under the AB-IR methodology, is the successful assignment of a voice channel.

Respectfully submitted,

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[21] TSB-119 at 2.6.3.1.2.